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WAR FOOD ADMINISTRATION
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WHAT WILL CIGARETTE DEMAND BE AFTER THIS WORLD WAR IS ALL OVER? 1/

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Some manufacturers of my acquaintance have shown a tendency to look at total output of cigarettes in 1943 and 1944--tax-paid and tax-free--and, construing this to be an accurate measure of normal present-day consumption, to assume that consumption would expand 10 or 15 percent a year from here on into the post-war period. This requires as basic assumptions that the change from war to peace will have no disturbing effects on our domestic aconomy; that all cigarettes which now leave our shores destined for the armed services flow rather directly to the men in uniform and are consumed by them with about the same time lag as applies to distributive operations at home; further, that no circumstances surrounding the return of soldiers and sailors to peacetime pursuits will lower their rate of cigarette consumption, but that on the contrary they and all the rest of us will smoke more and more cigarettes.

Purpose of this article is to analyze briefly, without becoming too oracular and pontifical, some of the factors entering into present cigarette comsumption and try to figure out how it is likely to be affected by termination of the war.

Domestic Consumption

The following table shows the output of cigarettes in the United States in recent years:

ted with permission from TOBACCO, March 29, 1945

Withdrawals of Cigarettes, United States, 1938-44

Calendar : Year :	Tax-paid 1/ Billions	Tax-free 2/	Total Billions
1938 :	163.8	7.9	171.7
1939 :	172.5	8.2	180.7
1940 :	180.7	8.7	189.4
1941 :	206.4	11.5	217.9
1942 :	235.8	21.7	257.5
1943 :	257.7	3/37.3	3/295.0
1944 :	239.3	3/80.7	3/320.0

- 1/ Tax-paid withdrawals are a fairly accurate measure of domestic-consumption. However, some have been sent abroad in Christmas packages and in 1944 a considerable volume was purchased by the Government from jobbers and wholesalers for overseas shipment.
- 2/ Tax-free cigarettes shown herein represent the difference between total manufactured and total tax-paid withdrawals. Tax-free cigarettes before the war were largely exports to foreign countries. Now they are primarily shipments to armed forces abroad, and supplies to the Merchent Marine in trans-ocean service. Some tax-free cigarettes are used domestically in penal institutions, and by the Red Cross for distribution to American servicemen and American prisoners of war in foreign countries.
- 3/ Preliminary estimate.

Compiled from reports of the Commissoner of Internal Revenue.



Where They Go

Domestic requirements for cigarettes, as reflected in tax-paid withdrawals, have expanded greatly since the onset of the war. Various factors have figured in this expansion. Most important of all has been the enormous increase in industrial employment and in pay rolls. As will be brought out more clearly farther along, and as clearly shown in Figure 1, tobacco consumption tends strongly to rise and fall in volume with increases and decreases in industrial output. The war has galvanized the whole country into intense activity along the industrial front. The Federal Reserve Board's index of industrial production, using 1935-39 output to equal 100, showed 1939 at 109 and 1943 at 239. The high point, reached in November 1943, was 247. November 1944 shows 232.

Some Significant Figures

Index figures for income of industrial workers, using the same base years, are still more significant: 1939, 105; 1943, 305; high point February 1944, 321; October 1944, 306. To put it in plain English, industrial production has more than doubled since the 1935-39 period, and the income of industrial workers has more than trebled. The more people at work and the more money they have to spend, the more cigarettes it takes to supply them.

The large number of men in training camps probably has had some effect on the expanded domestic demand. I feel quite sure that the conditions of life among soldiers, not only in training but in theaters of war, stimulate the craving for cigarettes. Associated with the question of smokes for servicemen, it seems to be pretty generally agreed that very substantial quantities of taxpaid cigarettes have been sent abroad by the families and friends of the men in uniform, and in an emergency the Army sent quite a lot of tax-paid cigarettes across in 1944.

Sum total of all these influences has been a phenomenal increase in our domestic use of fags, and any forecast of post-war trends must consider whether those influences will continue unabated.

Many times I have heard people assert that requirements of cigarettes for men in foreign service are not an important factor from the over-all standpoint, since the same men (and women) would be smoking cigarettes if they were over here. In several respects this assumption is faulty:

(a) It fails to take into account the great quantities of cigarettes necessary to fill up the pipelines of supply and build up stocks at strategic points. The following list of inventory positions for food necessary to supply armies overseas is quoted from an article by Dr. John B. Canning, Consultant, War Food Administration, which appeared in the November 1944 issue of the Journal of Farm Economics:

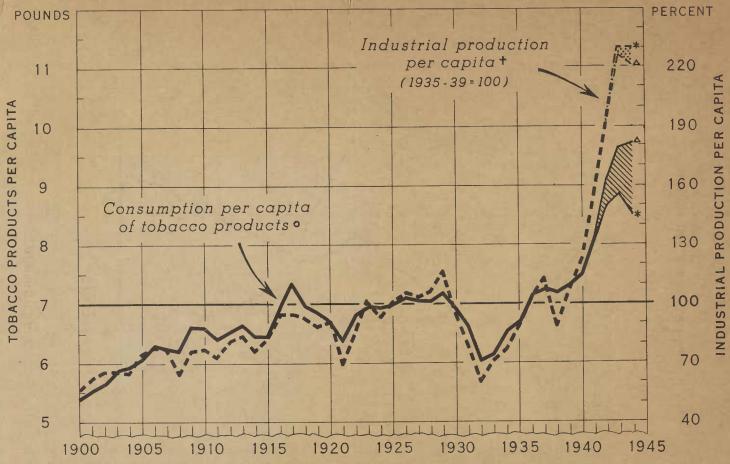
"Armies in overseas theaters of operation, in addition to their daily eating requirements and to the daily feeding requirements of dependent civilians in the same area, have to be backed up by the following chain of inventories: (1) tactical stocks in the immediate rear (company, battery, regimental, divisional, corps and army stocks) big enough to enable them to stand a cut in their supply lines; (2) over seas base or strategic stocks (e.g., those now in Britain and in North Africa) big enough to stend an all-out submarine and air attack to cut off sea-borne arrivals and big enough, in addition, to permit withdrawal of trans-ocean ships for final-step invasion duty; (3) supplies in sea transit (3 to 8 weeks' consumption requirements depending on location) from supply areas; (4) port stocks big enough to assure prompt ship loading with proportions dictated by last minute cables; (5) stocks in inland 'surge chamber' storage to relieve rail congestion; (6) stocks in rail transit to port; (7) stocks in supply depots in the Zone of the Interior; (8) stocks in contractors' hands earmarked for military use; (9) stocks of materials earmarked for packing under military contracts; and (10) set-aside or contingency reserves. In every one of these ten positions, foods, being perishable, are subject to losses. In many positions, enemy destruction is a significant factor. Because the chain of supply is long and because it changes without notice, some stocks get out of position."

For Cigarettes, Too

Correspondence with the Office of the Quartermaster General indicates that what Dr. Canning says about food holds good also as to cigarettes, although "one does get the impression of much larger stocks of food held by the Army than is actually the case."

While it may be reasonable to argue that once the pipelines have been filled and stockpiles built up the quantities needed will more nearly represent actual consumption requirements, it is still true that the output in 1943 and 1944 included the very large quantities above normal consumption to fill those lines and build those stockpiles. Also, that this more or less fictitious base is relied upon in projecting future annual increases of 10 to 15 percent.

CONSUMPTION PER CAPITA OF ALL TOBACCO PRODUCTS, AND INDUSTRIAL PRODUCTION PER CAPITA, UNITED STATES, 1900-1944



TEDERAL RESERVE BOARD INDEX NUMBERS ADJUSTED FOR CHANGES IN POPULATION.

BASED ON DATA PROM BUREAU OF INTERNAL REVENUE.

PRELIMINARY ESTIMATES FOR 1942 - 44: "INCLUDING ARMED FORCES ABROAD; * EXCLUDING ARMED FORCES ABROAD.

Figure 1 - This chart shows the close relationship between the rate of consumption of all tobacco products in the United States and industrial activity. It shows strikingly that consumption per capita rises and falls with employment expressed in terms of industrial output per capita. The shaded areas indicate the effect of including and excluding the armed forces abroad on the index of industrial production per capita and the per capita consumption of tobacco products.

CONSUMPTION PER CAPITA OF CIGARETTES (UNSTEMMED EQUIVALENT OF LEAF) AND SMOKING TOBACCO, AND INDUSTRIAL PRODUCTION PER CAPITA, UNITED STATES, 1920-44

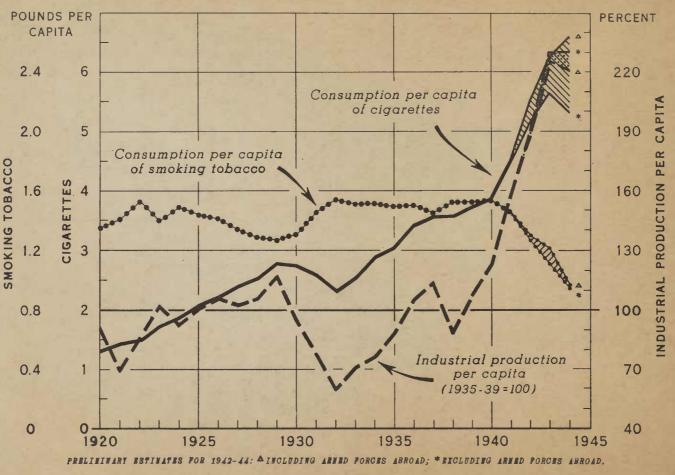


Figure 2 - This chart shows how cigarette and pipe tobacco consumption move in opposite directions, good times and bad. When industrial activity diminishes, digarette consumption decreases, and pipe tobacco consumption increases. War production got under way in earnest about 1940, and the effect on digarette consumption is apparent.

Hote that separate scales are shown at the left for digarettes and pipe tobacco. This was necessary

Note that separate scales are shown at the left for cigarettes and pipe tobacco. This was necessaring order to bring the lines closer together, for easy comparison. However, this has the effect of magnifying the apparent importance of pipe tobacco in relation to cigarettes.

- (b) A further defect is in assuming that all the cigarettes aside from those in stockpiles are smoked by our armed personnel. This ignores the quantities, possibly considerable, used by soldiers and sailors for trading purposes, gifts to friends acquired in England and occupied countries, and cigarettes lost through pilferage and black market operations. A representative of the Quartermaster. General has testified that in some theaters of operation abroad pilferage has ranged from 10 to 30 percent. The vigorous steps now being taken will reduce this, but it was a part of the consumption picture in 1943 and 1944.
- (c) Prisoners of war. Under the Gentva Convention cigarettes must be made available to prisoners of war here and abroad under exactly the same conditions as to our own soldiers. The requirements for this purpose, although perhaps not great, represent one phase of our present expanded consumption.
- (d) A fourth defect, which is important, lies in the assumption that smoking habits built up under conditions abroad will be unaffected by the wholly different conditions found by our men upon their return and demobilization. These facts are important to bear in mind: cigarettes, aside from these contained in all battle and emergency rations, can be purchased in the PX's abroad tax-free and at practically wholesale rates -- somewhat less than 6 cents a pack. This is far different from paying 15 cents or more. Also, the whole environment will be changed for the returning soldiers. Now they are far from home, except in thought's and longings, and are living a hard life. What more natural than that they should seek surcease from homesickness, the disturbing thoughts as to what fate may hold in store for them, and from the fatigue and misery of front line service by more or less constant smoking? It is highly probable that the average rate of smoking among the men in uniform has been materially increased by their changed conditions. Upon their return the whole picture will be altered. The problem of living within their budget will become more immediate; the cost of indulging in cigarettes will be $2\frac{1}{2}$ to 3 times greater; tension will be eased. How can it be assumed that these men will on the average consume as many as now, or annually 10 to 15 percent more?

Future Prospects

Assuming that the war with Japan will last longer than the one with Germany, a few generalizations seem rather obvious:

(a) Upon conclusion of the war in Europe many of the soldiers will either be brought home and mustered out, or will be transferred to Asiatic battlefronts. As to occupation forces retained in Europe, the problems of supply will be greatly simplified. No longer will it be necessary to maintain stockpiles at strategic points for meeting all the contingencies of war. On the contrary, supplies already built up or in transit may greatly reduce replacement needs for a time.

- (b) On the other hand, as our Pacific forces are augmented the volume of cigarettes necessary to maintain a pipeline 9,000 miles long will increase.
- (c) Eventually, however, the war in the Pacific will be over and requirements in that theater will diminish, so that as time goes on our cigarette problem will be restricted more and more to the domestic demand.
- (d) The industrial front. If, contrary to our first assumption, the wars in Europe and the Pacific were to terminate simultaneously there might be a wholesale cancellation of war contracts. If this should happen it is conceivable that several million workers would be thrown out of employment, some of them permanently, others for the period manufacturers would require for retooling and reconversion to the production of peacetime goods. Then the line in Figure 1 for industrial output would for a time descend almost vertically. Unless this reconversion period were very short the consequence, judging by past performance, would be a sharp decline in tobacco consumption. For reasons stated later this decline would be most marked in cigarettes, whereas consumption of pipe tobacco might increase.

As this is written (mid-February) events in Europe appear to be rushing toward the final dramatic climax. There is little reason to doubt that the war with Japan will outlast that with Germany by a considerable margin. Therefore the cancellation of war orders is likely to be stretched out over an indefinite period of time. Under these conditions the process of reconversion may be going on for some industries while others are still executing war orders. This gradual change-over from war to peace should cushion the effects of reconversion on employment and on cigarette consumption. It must be recognized, however, that the increased tempo of the war in the Pacific may forestall any cancellation of war contracts after the close of hostilities in Europe.

Where Do They Go?

All of this leads to the question of what the employment level will be after the war: just where in Figure 1 little colored tacks should be stuck to indicate the probable extension of the industrial output line.

Great as the peacetime industrial activity undoubtedly will be, it would be hazardous to assume that it will be on the grand scale of our wartime output. It is to be remembered that not only has nearly every pre-war manufacturing plant down to the tiniest shop been busy on gadgets for making war, but huge new factories and shippards have sprung up all over the country for turning out planes, tanks, ships, guns, ammunition, and other necessary equipment. It is impossible to say how many war plants have been working overtime, or two to three shifts a day, but the percentage is probably much higher than can reasonably be expected to hold under peacetime conditions.

It seems to me we can be reasonably sure, first, that notwithstanding programs for creating jobs, the employment curve will eventually turn downward as a result of readjustment from war to peace; second, that the steepness and extent of the decline will depend in part upon the rate at which war orders are cancelled and in part upon the duration of the reconversion lull in industry; and finally, that notwithstanding the succeeding upward trend, the line will for several years occupy a considerably lower space on the chart than it does today.

Also, we may look for a still greater decline in the income of industrial workers, partly because the highest wages now paid are in those war plants least likely to remain in operation, and partly because conditions requiring time-and-a-half or double-time pay are less likely to prevail.

A factor which may affect eigarette consumption in the immediate postwar period is the tendency of eigarette consumption and pipe tobacco consumption to move in opposite directions in response to any given change in the economic situation. When industry is in the doldrums and large numbers of wage earners are laid off, not only is there a decline in the total consumption of tobacco products but a pronounced shift from cigarettes to pipe tobacco.

Conversely, when pay checks flow again, cigarettes come back into their own, pipe tobacco eases off, and the total tobacco consumption increases. This reversal of trends between cigarette and pipe tobacco may be noted in Figure 2 in which the industrial output line of Figure 1 is shown along with per capita consumption of cigarettes (expressed in pounds of unstemmed leaf) and pipe tobacco.

Summary

I can find no logical basis for attributing permanence to the present high rate of cigarette consumption. Rather it seems to me we should anticipate that it will be adversely affected by reduced industrial activity after the war and by lower worker income; by the return of soldiers and sailors to peacetime pursuits and peacetime environment; by getting away from the necessity of maintaining pipelines of cigarettes across thousands of miles of salt water and large stockpiles at strategic points behind battle lines, and from having to provide against possible sea or battle losses, pilferage, or loss from other fortuitous causes.

It is not considered good form to hang crepe on the door before the patient is dead, and this is not intended as crepe, or as gloomy fore-bodings of things to come. A decline in cigarette requirements, however, seems to me inevitable. It may not be sudden but may be considerable, and in any case its effects may be softened by the present shortage for civilian use. After the reconversion period is over and industry gets into full swing on peacetime production, a recovery in cigarette consumption is almost certain to ensue, and it may be only a few years until the present high rate is regained. In the meantime, while the decline is in progress, a resurgence of pipe smoking seems entirely likely.